EXHIBIT "A"

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11/26/06

John T. Donovan
Rawle & Henderson
The Widener Building
One South Penn Square
Philadelphia, PA 19107

RE: Revak v. Locatum, et al

Dear Mr. Donovan,

I am writing to report to you the results of my investigation into the cause(s) of the sling failure in the subject accident.

In the course of my investigation I examined or reviewed the following items:

1. The subject sling. I also photographed it, and a CD containing these photographs is attached to this report
2. The second amended complaint.
3. Copies of color photographs that you supplied to me.
4. A CD of photographs from the offices of E. Powers.
5. The depositions of: Revak, Bijerk, Lukassen, Strijland, Kuursta, Häggkvist, Eriksson, Mattson, Johansson and Ogren.
6. The report of Robert A. Erb, Ph.D.

Mr. Revak was injured by a bundle of lumber that fell on him when an endless polyester lifting sling failed. You asked me to determine, if possible, why the sling failed.

According to the deposition testimony, the draft of lumber that fell on Mr. Revak consisted of 4 or 5 individual bundles, weighing approximately 1100 pounds each, for a total weight of 5500 pounds, assuming five bundles in the draft. Two endless lifting slings, each of which had a working load limit of 2000 kilograms (4400 pounds) supported this weight. (Chief Officer Lukassen said in his deposition that the slings have a safe working load of 3500 kilograms or 7700 pounds. I believe he was mistaken because the green color of the sling indicates it to have a 2000-kilogram working load limit. The label is missing from the sling, so the working load limit must be inferred from the color.) The two slings combined had a total capacity of 8800 pounds in a straight pull, compared to an actual weight in the draft of 5500 pounds, but the pull was not straight, so the working load limit must be commensurately reduced. Given the dimensions of the bundles and the length of the straps, the effect of this angle is to reduce the working load limit by only about 15%. Thus under these conditions, the safe working load of the two

slings combined was 7480 pounds, compared to the actual weight in the draft of 5500 pounds (with five bundles of lumber). This calculation shows that the sling was not overloaded at the time of the accident.

When a damage-free sling is loaded to its working load limit it will definitely NOT fail, since the working load limit is much smaller than the breaking load of the sling. In fact, the working load limit is required by European Standard EN 1492-1 to be no more than one seventh of the breaking strength of the sling. Therefore the subject sling would be expected to break at a load of 7 times 7480 pounds, or 52,360 pounds. The fact that this breaking load is almost ten times larger than the load placed on it at the time of the accident indicates that the sling had been severely damaged prior to the accident. In the following I consider possible sources of that damage.

Except for the fracture in the subject sling and a deliberate cut made after the accident, the sling shows little damage. The surface of the sling is abraded in some areas, but only a very small fraction of the fibers is significantly damaged. Also, some fibers are cut in some localized areas, but, again, the number of cut fibers is a very small fraction of the total. Since the strength of the sling is determined by the fraction of undamaged fibers, the damage to the fibers outside the failure zone reduced the breaking strength of the sling by only a few percent. Samples of this damage are shown in Photographs #1 and 2.

I now consider the specific area of the fracture, as shown in Photograph 3. This photograph shows the two sides of the fracture placed end to end in their correct relative orientations. Most of the fracture surfaces consist of a relatively straight portion that is perpendicular to the axis of the sling. The length of this section is about 50 mm of the 60 mm width of the strap, indicated by 'pinched/cut' on the photograph. The second portion of the fracture surface consists of a 10 mm wide 'tail' attached to the right side with a matching area on the left side. In addition, the 50 mm long section on the left side underwent considerable lateral contraction, as shown in the photograph, while the right side underwent little or no contraction. The absence of lateral contraction on the right hand side indicates that this side was subjected to much smaller loads at failure than the left hand side. Furthermore, the left side of the fracture is abraded in the direction shown, and this abrasion terminates on a 'nub' of polypropylene fibers on the right side of the fracture. All these features point to the fact that the 50 mm long portion of the fracture resulted from the sling having been pinched between a fixed object and the load during lifting. Under such a condition, the left side of the fracture was placed under very high stress while the right side bore a much smaller load, resulting in both the pinching/cutting of the sling along the 50 mm length of the fracture and the lateral contraction on the left hand side. After the sling was cut, no more than a 10mm wide section of the sling was carrying the load, see '10 mm wide remaining ligament' on the photograph.

Based on the above observations of the fracture surface and the surrounding area, I conclude that the damage reduced the strength of the sling by at least 80%.

The two sides of the fracture in Photograph #3 show no other differences, for example, no differences in soiling, indicating that the damage to the sling occurred relatively

recently relative to the time of the accident. Damage of the type described here is not uncommon, for example, see pages 53 and 54 of Mr. Eriksson's deposition.

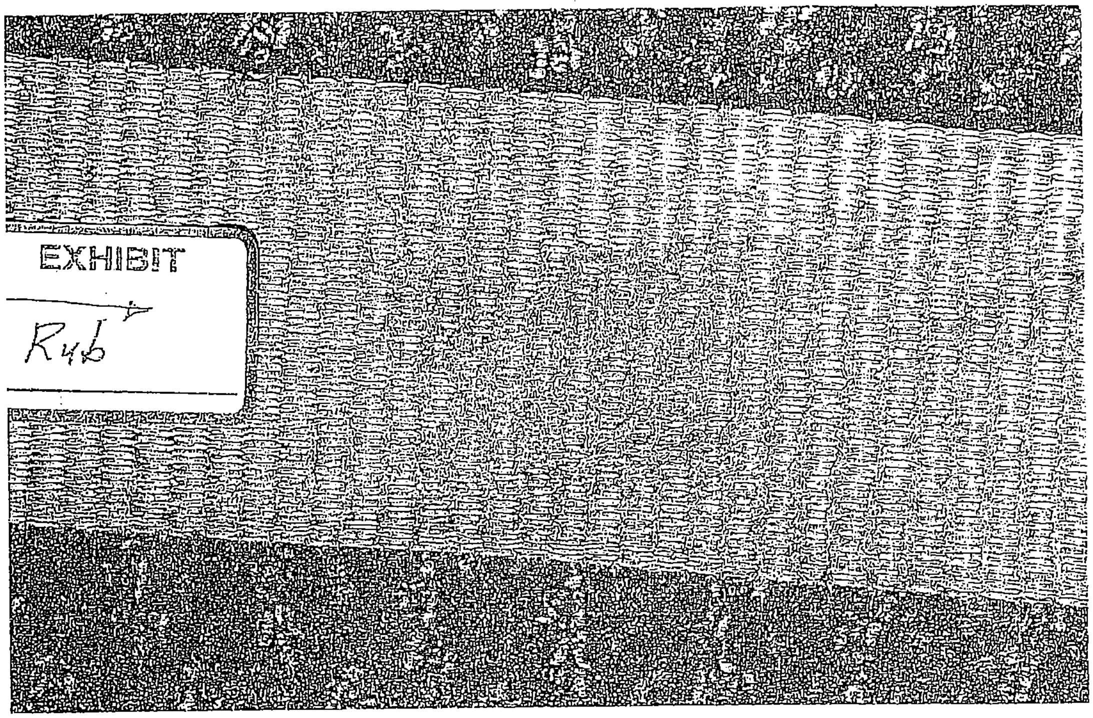
Given that the sling was so severely damaged prior to the accident, and that it failed while the load was just being slightly repositioned, it is highly unlikely that it could have withstood the forces required to lift the draft out of the ship. Therefore the damage occurred during the lift itself, i.e., the draft pinched the sling against a portion of the ship while it was being lifted from the ship in Philadelphia.

In summary, I conclude the following to a reasonable degree of engineering certainty: The subject sling was damaged and its load bearing capacity was reduced by at least 80% while the draft was being lifted from the ship in Philadelphia. The remaining segment of the damaged sling could just carry the dead load of the draft, but a small increase in the load, as caused by moving the load as it was being positioned above the dock, was sufficient to break that remaining small segment. There is no evidence that the sling was damaged to the point of being unsafe prior to the final lift in Philadelphia, rather, the damage leading to the failure was introduced during this final lift. It is also likely that the label was torn from the sling by this same event.

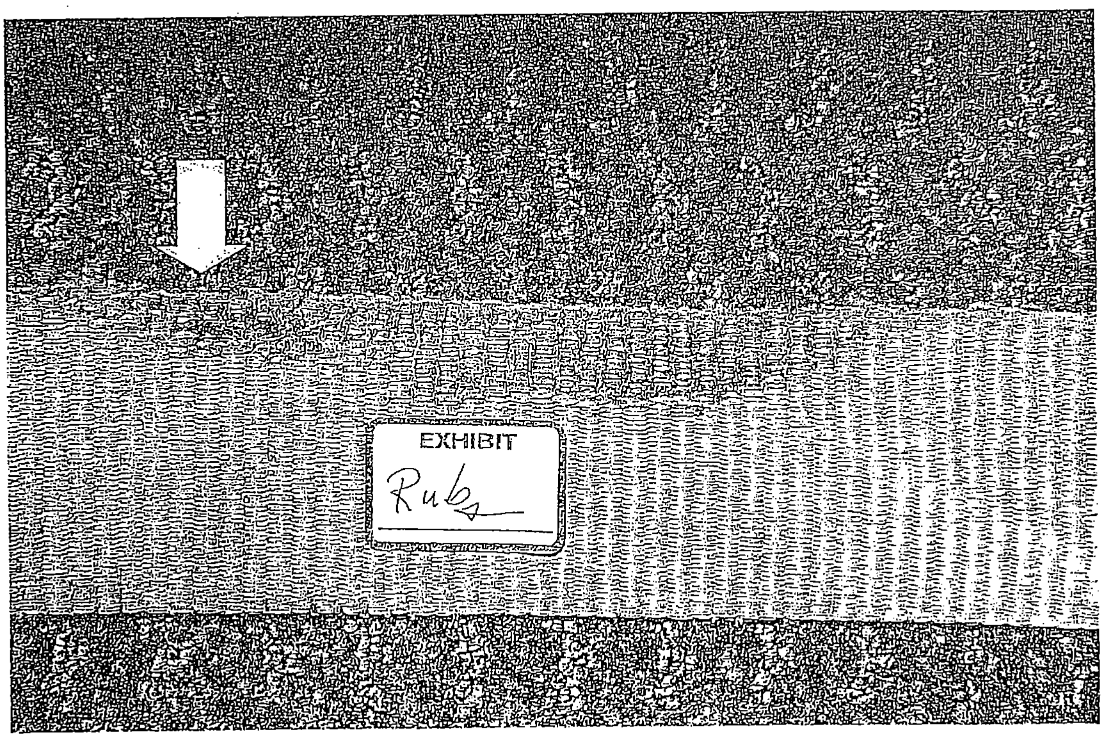
Sincerely,

David P. Pope

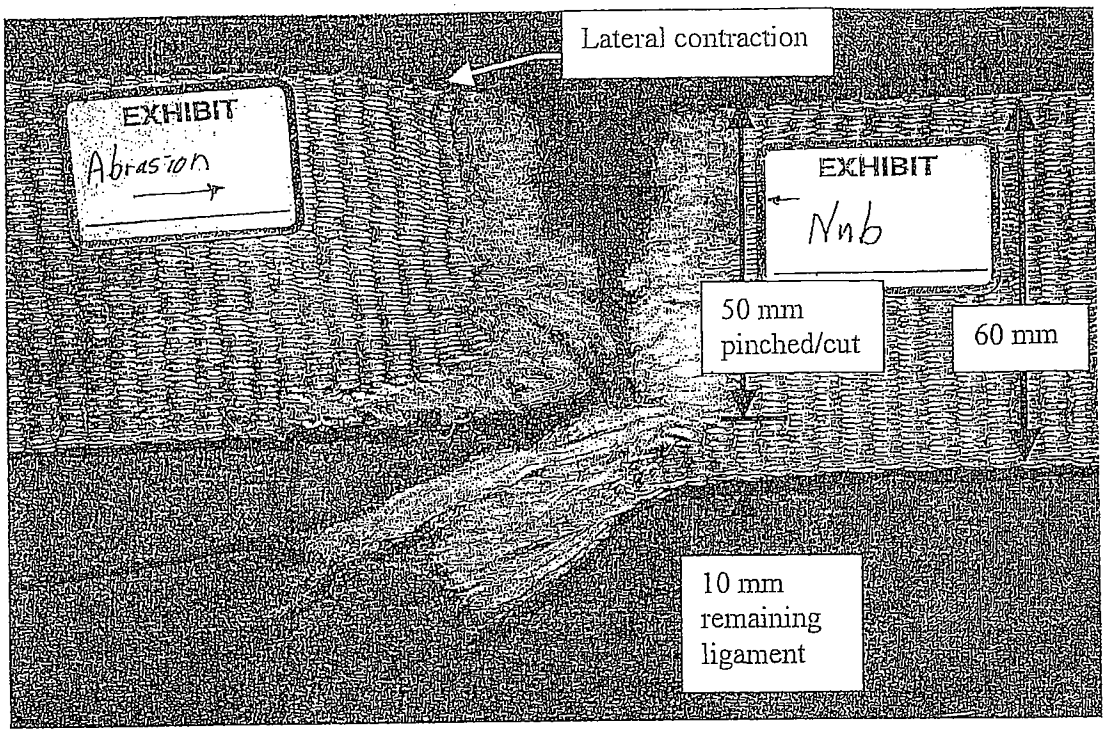
David P. Pope, Ph.D.



Photograph #1. An area of abrasive wear on the sling. Note the absence of cut fibers.



Photograph #2. An area of abrasive wear with some cut fibers, see arrow.



Photograph #3. The fracture site on the sling. Prior to the accident 50mm of the 60 mm cross section was cut, leaving only a 10 mm remaining ligament to carry the load.

CURRICULUM VITAE
David Peter Pope

Education	1961 - B.Sc., Engineering Science, University of Wisconsin, Madison, Wis., USA 1962 - M.S., Materials Science, California Institute of Technology, Pasadena, Calif., USA 1967 - Ph.D., Materials Science, California Institute of Technology, Pasadena, Calif., USA
Positions Held	
January 1967 to July 1968	Post-doctoral Fellow - California Institute of Technology
August 1968	Assistant Professor, School of Metallurgy and Materials Science University of Pennsylvania
July 1973	Associate Professor, Department of Materials Science and Engineering University of Pennsylvania
July 1982	Professor, Department of Materials Science and Engineering University of Pennsylvania
July 1984 to Nov. 1988	Associate Dean, Undergraduate Education School of Engineering and Applied Science University of Pennsylvania
Nov. 1988 to June 1992	Chairman, Department of Mechanical Engineering University of Pennsylvania
June 1992 to August 1994	Chairman, Department of Materials Science and Engineering University of Pennsylvania
August 1994 to July 1997	Associate Dean, Undergraduate Education School of Engineering and Applied Science University of Pennsylvania
July 2003 to July 2006	Ombudsman University of Pennsylvania
July 1997 to Present	Professor, Department of Materials Science and Engineering University of Pennsylvania

Honors/Distinctions

National Science Foundation "Creativity Award"
Sigma Xi
Tau Beta Pi
Fellow, ASM International
S. Reid Warren Teaching Award, Univ. of PA

Professional Activities (since 1989)

Member, Advisory Committee, Metals & Ceramics Division, Oak Ridge National Laboratory, 1988-90; Chair, 1990.
Co-organizer, International Symposium on High Temperature Aluminides and Intermetallics, Indianapolis, IN, 10/1-5/89, ASM/AIME
Member, International Committee, International Conference on the Strength of Metals and Alloys, Israel, July 1991.
Member, Board of Directors, Friends of the Wissahickon, 1989-.
Member, Visiting Committee for the Division of Humanities, University of Virginia, School of Engineering and Applied Science, 1989.
Co-organizer, Symposium on Alloy Phase Stability and Design, Materials Research Society, April, 1990.
Co-organizer, Symposium on High Temperature Ordered Intermetallic Alloys, Materials Research Society, November, 1990.
Co-organizer, International Conference on Intermetallic Compounds and Composites, TMS, Fall, 1991.
President, Friends of the Wisshickon, 1992-1998
Chair, Peer Review Committee, Intermetallics Research Program, NASA Lewis 1992.
Editorial Board, Journal of Intermetallics, 1992 - 1997.
Co-orginizer, Int'l Conf. on High Temperature Intermetallics, ASM, May 1994
Co-organizer, Int'l Conf. on High Temperature Intermetallics, ASM, May 1997
Organizer, 4th International conference on Ultra-High Purity Metallic-Base Materials, Sept., 1997.

Research Interests

Deformation and fracture of intermetallic compounds, crystal growth, high temperature fracture, strength of metal-ceramic interfaces, ductile to brittle transition.

Publications (Recent, from approximately 200 publications)

"The Effects of Boron on the High Temperature Ductility of Iron and Steel", Scripta Met., 20, 1785-90 (1986), with P.L. Li and E.P. George.

"Creep Ductility of CrMoV Steels: Impurity and Microstructural Effects", Scripta Met., 20, 1775-80 (1986), with E.P. George and S.-H. Chen.

"Creep Cavitation in Iron I: Sulfides and Carbides as Nucleation Sites", Acta Met., 35, 2471-86 (1987), with E.P. George and P.L. Li.

"Creep Cavitation in Iron II: Oxides as Nucleation Sites", Acta Met., 35 (1987), 2487-95 with E.P. George and P.L. Li.

"Creep Damage Nucleation Sites in Ferrous Alloys", Mat. Sci. Eng., A103, 97-102 (1988), with J.E. Benci and E.P. George.

"The Tensile Ductility of Fe-3.5 Si at Elevated Temperatures: Impurity Effects", Scripta Met., 23, 109-112 (1989), with C.P Warner and J.E. Benci.

"Environmental Embrittlement: The Major Cause of Room-Temperature Brittleness in Ni_3Al", Scripta Met. et Mat. 27, 365-70 (1992), with E. P. George and C. T. Liu.

"An Atomistic Study of the Dislocation Core Structures and Mechanical Behavior of a Model DO_{19} Alloy", Mat. Sci. Eng., A152 (1992), pp. 95-102, with J. Cserti, M. Khantha, and V. Vitek.

"An Atomistic Study of Dislocations and their Mobility in a Model DO_{22} Alloy", Mat.Sci. Eng., A152 (1992) pp. 89-94, with M. Khantha and V. Vitek.

"The Influence of Grain Boundary Geometry on Intergranular Crack Propagation in Ni_3Al", Acta Met. 41, 553-62 (1993), with H. Lin.

"Stability and Thermal Properties of the Cubic Laves Phase $Hf_{30}V_{55}Nb_{15}$", Scr. Met. et Mat. 28, 331-36 (1993), with F. Chu.

"Intrinsic Ductility and Environmental Embrittlement of Binary Ni_3A1", Scripta Met. et Mat., 28, 857-62 (1993), with E. P. George and C. T. Liu.

"Deformation Twinning in Intermetallic Compounds - the Dilemma of Shears vs. Shuffles", Mat. Sci. Eng., A170, 39-47 (1993), with F. Chu.

"Twinning in Intermetallic Compounds - Are Long Sear Vectors and/or Shuffles Really Necessary?", J. Mater. Sci. Technol., 9, #5, (1993), pp 313-321, with F. Chu.

"A Combined Experimental and Analytical Investigation of Creep Damage Development in Copper", Acta Met. et Mat. 42, 225-238 (1993), J. E. Benci and J. L. Bassini.

"Atomic Force Micrcroscopy Observations of Iron-Sapphire Fracture Surfaces", Mat. Sci & Eng., A176, 405-409 (1994), with M.A. Smith, and J. Y. Josefowicz.

"Grain Boundary Faceting and Twinning in Complex Intermetallic Compounds, Phil. Mag. A, Phil. Mag. A, 69, 409-20 (1994), with F. M. Chu.

"Dynamic and Static Strain Aging Effects in Fe-Modified $L1_2Al_3Ti$", Acta Met. et Mat., 42, 3577-3580 (1994), with Z.L. Wu and V. Vitek

"Plastic Deformation of Cr-Modified $L1_2Al_3Ti$: (I) Flow Behavior", Phil.Mag. A, 70, 159-169 (1994), with Z.L. Wu and V. Vitek.

"Plastic Deformation of Cr-Modified $L1_2Al_3Ti$: (II) Weak Beam TEM Study of Dislocation Structures", Phil. Mag. A, 70, 171-183 (1994), with Z.L. Wu and V. Vitek.

"Effect of Vacuum on Room Temperature Ductility of Ni_3Al", with E.P. George and C.T. Liu, Scr. Met. et Mat., 30, 37-42 (1993).

"Atomistic Modelling of Planar Faults, Dislocations and Twins in a Non-Cubic Intermetallic Compound", Modelling Simul. Mater. Sci. and Eng., 2, 587-596, (1994), with M. Khantha and V. Vitek

"Texture and Grain Boundary Character Distribution in Recrystallized Ni_3Al Sheets", Scripta Met. et Mat., 30, 1409-1412 (1994), with Hui Lin.

"The Brittle-to-Ductile Transition - I: A Cooperative Dislocation Generation Instability", Scr. Met. et Mat., 31, 1349-1354 (1994), with M. Khantha and V.Vitek.

"Dislocation Generation Instability and the Brittle-To-Ductile Transition", Mat. Sci. and Eng., A192/193, 435-442 (1995), with M. Khantha and V.Vitek.

"Environmental Embrittlement and Other Causes of Brittle Grain Boundary Fracture in Ni_3Al", E. P. George, C.T. Liu, H. Lin, and D. P. Pope, Mat. Sci. and Eng., A192/193, 277-288 (1995).

"Mechanical Behavior of Ni_3Al: Effects of Environment, Strain Rate, Temperature and Boron Doping", E. P. George, C. T. Liu, and D. P. Pope, Acta Met. et Mat., 44, 1757-1763 (1996).

"High Temperature Applications of Intermetallic Compounds", D. P. Pope and Ram Darolia, MRS Bulletin, 21, #7, 30-36 (1996).

"Impurities, Toughness and Intermetallic Compounds: An Overview", Phys. Stat. Sol.(A), 160, 481-486, (1997).

"Review of Trace element Effects on High-temperature Fracture of Fe- and Ni-Base Alloys", Phys Stat. Sol., 167, 313-333, (1998), with E. P. George and R. L. Kennedy.

"Deformation of Hf-V-Nb Laves Phase Alloys", Y. Kimura, D. Pope, and D. Luzzi, Trans. Nonferrous Met. Soc. China, 9, 169-79, (1999).

"Deformation of a Hf-V-Nb Laves Phase Alloy", Y, Kimura, D. E. Luzzi, and D. P. Pope, in Proceedings of the 3rd International Workshop on Ordered Intermetallic Alloys and

Composites, Trans. Nonferrous Met. Soc. China, **9**, Suppl. 1, Dong-Liang Lin, Editor, Beijing, PRC, (1999) pp 169-79.

"Temperature-Dependent Onset of Yielding in Dislocation-Free Silicon: Evidence of a Brittle-to-Ductile Transition", R. H. Folk II, M. Khantha, D. P. Pope, and V. Vitek, in Fracture and Ductile vs. Brittle Behavior - Theory, Modelling, and Experiment, G. Beltz, Robin L. Blumberg Selinger, Kyung-Suk Kim and M. Marder, Editors, Materials Research Society, Warrendale, PA, USA, (1999) pp 161-167.

"Deformation of polysynthetically twinned TiAl single crystals with near-hard orientations", Min-Chul Kim, M. Nomura, V. Vitek and D. P. Pope, in High-Temperature-Ordered Intermetallic Alloys VIII, E. George, M. Mills and M. Yamaguchi, Editors, MRS Symposium Proceedings, (1999) p. KK3.1.1.

"Deformation of Two-Phase Alloys Based on C15 Laves Phase HfV_2 + Nb", Y. Kimura, D. E. Luzzi, and D. P. Pope, in High-Temperature-Ordered Intermetallic Alloys VIII, E. George, M. Mills and M. Yamaguchi, Editors, MRS Symposium Proceedings, (1999).

"Deformation of Polysynthetically Twinned TiAl single crystals with near-hard orientations: experiments and atomistic simulations", M. Nomura, Min-Chul Kim, V. Vitek and D. P. Pope, in Gamma Titanium Aluminides 1999, Y. W. Kim, D. M. Dimiduk, and M. H. Loretto, Editors, TMS, Warrendale, PA, (1999) pp 67-73.

Books/Chapters in Books

"Embrittlement of Ferrous Alloys Under Creep Conditions", in: Embrittlement of Engineering Alloys, C.L. Briant and S.K. Banerji, Editors, Treatise on Materials Science and Technology, Vol. 25, Academic Press, 1983, NY, pp. 125-155.

"Strength and Ductility of Intermetallic Compounds", in: Superalloys, Supercomposites and Superceramics, J.K. Tien and T. Caulfield, Editors, Academic Press, 1989, San Diego, CA, pp. 583-624, with C.T. Liu.

High Temperature Aluminides and Intermetallics, S.H. Whang, C.T. Liu, D.P. Pope and J.O. Stiegler, Editors, TMS, Warrendale, PA (1990).

High Temperature Aluminides and Intermetallics, Proceedings of the Second International Conference, S.H. Whang, D.P. Pope, and C.T. Liu, Editors, Elsevier Science, England (1992).

High Temperature Ordered Intermetallic Alloys, IV, J.O. Stiegler, D.P. Pope, and L. Johnson, Editors, MRS, Pittsburgh, PA (1991).

Alloy Phase Stability and Design, G. Malcolm Stocks, D. P. Pope and A. F. Giamei, Editors, MRS, Pittsburgh, PA (1991).

High Temperature Intermetallics, Proceedings of the Third International Conference, D.P. Pope, S.H. Whang and C.T. Liu, Editors, Elsevier Sequoia S.A., Lausanne, Switzerland (1995).

"Ni_3Al and Its Alloys", C.T. Liu and D.P. Pope, in: Intermetallic Compounds, vol. 2: Practice, J.H. Westbrook and R.L. Fleischer, Editors, John Wiley & Sons, West Sussex, England (1995), pp 17-51.

"Anomalous Yield Behavior of Compounds with the Ll_2 Structure", V. Vitek, D.P. Pope and J.L. Bassani, in: Dislocations in Solids, Volume 10: $L1_2$ Alloys, F.R.N. Nabarro and M.S. Duesberry, Editors, Elsevier, the Netherlands, (1996) pp.135-185.

"The Mechanical Properties of Intermetallic Compounds", in: Physical Metallurgy, 4th edition, R. W. Cahn and P. Haasen, Editors, Elsevier Science BV, the Netherlands (1996), pp 2076-2104.

High Temperature Intermetallics, Proceedings of the Fourth International Conference, D.P. Pope, S.H. Whang and C.T. Liu, Editors, Elsevier Sequoia S.A., Lausanne, Switzerland (1997).

Proceedings of the Fourth International Conference on Ultra-High Purity Metallic-Base Alloys, D. P. Pope, T. Egami, and C. J. McMahon, Editors, Phys. Stat. Sol.(a), Wiley -VCH, Weinheim, Germany, (1998).

"Temperature-Dependent Onset of Yielding in Dislocation-Free Silicon: Evidence of a Brittle-to-Ductile Transition", R. H. Folk II, M. Khantha, D. P. Pope, and V. Vitek, in Fracture and Ductile vs. Brittle Behavior - Theory, Modelling, and Experiment, G. Beltz, Robin L. Blumberg Selinger, Kyung-Suk Kim and M. Marder, Editors, Materials Research Society, Warrendale, PA, USA, (1999) pp 161-167.

"Ni_3Al and Its Alloys", C.T. Liu and D.P. Pope, in: Intermetallic Compounds, vol. 2: Practice, J.H. Westbrook and R.L. Fleischer, Editors, John Wiley & Sons, West Sussex, England, 2003.